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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,413	09/24/2001	Keizo Hirose	33082M102	5643

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EXAMINER

BALSIS, SHAY L

ART UNIT

PAPER NUMBER

1744

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/960,413

Applicant(s)

HIROSE ET AL.

Examiner

Shay L Balsis

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-19 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 12 and 13 all include the limitation “thready” when describing the brush members. It is unclear what exactly “thready” means. Applicant is asked for clarification. Correction is necessary.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4-9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Belan (USPN 4958596)

Belan teaches a brush (30) comprising straight brush members (36) that have channels (39) formed therein for passage of cleaning liquid. The brush members are capable of ejecting

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the cleaning liquid through respective surfaces of the brush members through a number of channels (49). The brush member is made of a water permeable material and is shaped to be hollow. The brush members have their ends collected in a bundle at the head (32) of the brush.

5. Claims 1-2, 4-9, and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans (USPN 4039261)

Evans teaches a brush (70) comprising straight brush members (64) that have channels formed therein for passage of cleaning liquid. The brush members are capable of ejecting the cleaning liquid through respective surfaces of the brush members through a number of channels (66). The brush members are made of a water permeable material and are shaped to be hollow. The brush members have their ends collected in a bundle at the head (46) of the brush.

6. Claims 1, 3, 6-9, 12-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Yonemizu et al. "*Yonemizu*" (USPN 5858112).

Yonemizu teaches a substrate cleaning apparatus comprising straight brush members (92) that have channels formed therein for passage of cleaning liquid (col. 12, lines 17-28). The cleaning apparatus is capable of rotating against the substrate. The brush members have their ends collected in a bundle at the head (93) of the brush. The substrate cleaning tool has a scrub arm (91) for holding the substrate cleaning apparatus and a holder (30) for holding a substrate to be cleaning by the substrate cleaning apparatus. There is a drive mechanism (95) for rotating the cleaning and driving it up and down. There is a nozzle for ejecting liquid for rinsing (65).

7. Claims 1, 3, 6-9, 12-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Nakashima et al. "*Nakashima*" (USPN 6115867).

Nakashima teaches a substrate cleaning apparatus comprising straight brush members (25a) that have channels (25b) formed therein for passage of cleaning liquid. The cleaning apparatus is capable of rotating against the substrate. The brush members have their ends collected in a bundle at the head of the brush. The substrate cleaning tool has a scrub arm (25d) for holding the substrate cleaning apparatus and a holder (29) for holding a substrate to be cleaning by the substrate cleaning apparatus. There is a drive mechanism (90, 91) for rotating the cleaning and driving it up and down. There is a nozzle for ejecting liquid for rinsing (24).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-9, 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonemizu and Nakashima both in view of Belan.

Yonemizu and Nakashima teach all the essential elements of the claimed invention however the references fails to teach hollow brush member with channels that allow for a liquid supply. Belan teaches a brush with brush member that are hollow and allow for a cleaning agent to be supplied from the brush member through channels and openings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use brush members that were hollow and allowed for a liquid supply to optimize the cleaning capabilities of the substrate cleaners and as taught by applicant to prevent any contaminates from sticking to the brush members to thus optimize the cleaning of substrates.

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10. Claims 1-9, 12-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonemizu and Nakashima both in view of Evans.

Yonemizu and Nakashima teach all the essential elements of the claimed invention however the references fails to teach hollow brush member with channels that allow for a liquid supply. Evans teaches a brush with brush member that are hollow and allow for a cleaning agent to be supplied from the brush member through channels and openings. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use brush members that were hollow and allowed for a liquid supply to optimize the cleaning capabilities of the substrate cleaners and as taught by applicant to prevent any contaminates from sticking to the brush members to thus optimize the cleaning of substrates.

11. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belan, Evans, Yonemizu, and Nakashima all in view of Hirata (USPN 6126530)

Belan, Evans, Yonemizu, and Nakashima teach all the essential elements of the claimed invention however the references fail to teach using bristles of different lengths. Hirata teaches a brush using bristles of different lengths. It would have been obvious to one of ordinary skill in the art at the time the invention was made make the brush members of Belan, Evans, Yonemizu, and Nakashima have long and short bristles because it is possible to use the short bristles once the long bristles wears out, permitting prolonged continuous use of the brush, which are apt to wear.

*Conclusion*

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L Balsis whose telephone number is 703-305-7275. The examiner can normally be reached on 7:30-5:00 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Warden can be reached on 703-308-2920. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-5665.

slb

9/11/03



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